



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/787,515  
Filing Date: February 26, 2004  
Appellant(s): CLARKE ET AL.

---

Jack G. Abid  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 1/03/2008 appealing from the Office action  
mailed 7/13/2007

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,978,577	Rierden et al.	11-1999
6,871,215	Smith et al.	3-2005
5,560,005	Hoover et al.	9-1996

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**DETAILED ACTION**

This Office Action corresponds to application 10/787,515 filed 2/26/2004.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 9, 10, 14, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by

**Rierden et al.** (hereinafter **Rierden**, US 5,978,577).

Regarding claim 1, **Rierden** teaches a communications system comprising:

a plurality of account databases each for storing information associated with different accounts (See column 2, lines 22 - 29 “Cable system operators typically maintain large databases containing a variety of subscriber, product and billing information...include subscriber accounts...It is often desirable to distribute this information across a network of databases whether or not they are located at the same physical location.”);

a central database [DDS] for storing location information associating each account with a respective account database [data servers] (See column 4, lines 11-16 “According to one embodiment of the invention, these and other objects of the invention are achieved through the use of at least one Data Directory Server (DDS) located between one or more transaction generators and one or more data servers. The DDS efficiently routes transactions and provides data location functions.” and see FIG 5. showing the different account information being stored on the data servers.), and also for storing shared system setup information (col. 23 lines 23-49);

at least one communications device [transaction generators] for accessing account information (See column 5, lines 45-48 “The transaction generators 120 in the system of the present invention may be any devices capable of receiving input from a human user and transmitting that input to the Data Directory Servers (DDSs) 150.”); and

an interface device [DDS] for receiving an account access request from said at least one communications device for a desired account (See column 6, line 8 “After receiving a client request...” The DDS in the invention contains the equivalent of both the central database and the interface device of the claims. While there is no separate interface device, the DDS performs the function of both the central database and the interface device of the claims, and examiner considers them to be equivalent.),

retrieving account location information from said central database for the desired account (see column 6, lines 8-10 "...the selected DDS 150 first locates the appropriate server 160..." and see column 8, lines 55 – 57 "There is also provided an Xref Server Table (global) which identifies all known and accessible Xref Servers 170." Either the DDS or the Xref Server could be considered to be a central database which stores account location information.), and interfacing said at least one communications device with said respective account database associated with the desired account based thereon (see column 6, lines 10-12 "...it then submits the client request to the selected server and finally the DDS 150 returns the result to the submitting client 120." And see column 9, lines 22 – 25 "Alternatively, the result set may pass through the DDS 150 to the client 120 without any additional processing on the part of the DDS 150..." This is providing an interface between the account database and the communication device.), and

caching [storing in a local table] the account location information and using the cached account location information (See column 28, lines 51- 54 "In a second embodiment, the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number, the server containing the associated data." Storing in a local table on the DDS is considered caching the account location information.) for subsequently interfacing [transmitting to Server A] said at least one communications device with said respective account database. (See column 28, lines 57 – 61 "...the command stream generated by the DDS is transmitted to Server A which executes the commands and returns the record for Joe Smith through the DDS, in passthrough mode, to the requesting client.").

said interface device also retrieving and caching the shared system setup information (col. 23 lines 23-49) for use in interfacing (col. 3 line 15-20) said at least one communication device with said respective account database.

Regarding claim 2, Rierden teaches said interface device comprises a caching module for caching the account location information. (See column 28, lines 51- 54 “In a second embodiment, the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number, the server containing the associated data.” Storing in a local table on the DDS is considered caching the account location information.)

Regarding claims 3, 10, and 18, Rierden teaches said at least one communications device has an operating protocol associated therewith, and wherein said interface device comprises at least one protocol interface module for communicating with said at least one communications device [transaction generators] using the operating protocol. (See column 2, lines 49 – 53 “Communication techniques and protocols which are known in the art are employed to allow the transaction generators to communicate with the servers. For example, Eterne™ may be used when both client and server are PC-based processors.”)

Regarding claim 9, Rierden teaches an interface device for interfacing at least one communications device [transaction generators] with a plurality of account databases [data servers] each for storing information associated with different accounts (See column 4, lines 11-16 “According to one embodiment of the invention, these and other objects of the invention are achieved through the use of at least one Data Directory Server (DDS) located between one or more transaction generators and one or more data servers. The DDS efficiently routes transactions and provides data location functions.” and see FIG 5. showing the different account information being stored on the data servers.); the interface device comprising:

a control module [DDS] for receiving an account access request from the at least one communications device [transaction generator] for a desired account (See column 5, lines 45-48 “The transaction generators 120 in the system of the present invention may be any devices capable of receiving input from a human user and transmitting that input to the Data Directory Servers (DDSs) 150.”),

retrieving account location information [locates the appropriate server] associating the desired account with a respective account database from a central database (see column 6, lines 8 – 10 “After receiving a client request, the selected DDS 150 first locates the appropriate server 160 for execution for the request...”), and

interfacing the at least one communications device with the respective account database associated with the desired account based thereon (see column 6, lines 10-12 "...it then submits the client request to the selected server and finally the DDS 150 returns the result to the submitting client 120." And see column 9, lines 22 – 25 "Alternatively, the result set may pass through the DDS 150 to the client 120 without any additional processing on the part of the DDS 150..." This is providing an interface between the account database and the communication device.), and

a caching module [internal table, part of the DDS] coupled to said control module [DDS] for caching the account location information [server containing associated data] (See column 28, lines 51- 54 "In a second embodiment, the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number, the server containing the associated data." Storing in a local table on the DDS is considered caching the account location information.), said control module using the cached account location information for subsequently interfacing [transmitting to Server A] the at least one communications device with the respective account database. (See column 28, lines 57 – 61 "...the command stream generated by the DDS is transmitted to Server A which executes the commands and returns the record for Joe Smith through the DDS, in passthrough mode, to the requesting client.");

the central database further storing shared system setup information (col. 23 lines 23-49), and said control module also retrieving the shared system setup information (col. 23 lines 23-49) for use in interfacing (col. 3 line 15-20) the at least one communications device with the respective account database, and said caching module caching the retrieved shared system setup information (col. 23 lines 23-49).



Regarding claim 14, Rierden teaches a method for interfacing at least one communications device [transaction generators] with a plurality of account databases [data servers] each for storing information associated with different accounts (See column 4, lines 11-16 “According to one embodiment of the invention, these and other objects of the invention are achieved through the use of at least one Data Directory Server (DDS) located between one or more transaction generators and one or more data servers. The DDS efficiently routes transactions and provides data location functions.” and see FIG 5. showing the different account information being stored on the data servers.); the method comprising:

receiving an account access request from the at least one communications device [transaction generator] for a desired account (See column 5, lines 45-48 “The transaction generators 120 in the system of the present invention may be any devices capable of receiving input from a human user and transmitting that input to the Data Directory Servers (DDSs) 150.”);

retrieving account location information [locates the appropriate server] associating the desired account with a respective account database and shared system setup information (col. 23 lines 23-49) from a central database (see column 6, lines 8 – 10 “After receiving a client request, the selected DDS 150 first locates the appropriate server 160 for execution for the request...”);

interfacing the at least one communications device with the respective account database associated with the desired account based upon the retrieved account location information (see column 6, lines 10-12 "...it then submits the client request to the selected server and finally the DDS 150 returns the result to the submitting client 120." And see column 9, lines 22 – 25 "Alternatively, the result set may pass through the DDS 150 to the client 120 without any additional processing on the part of the DDS 150..." This is providing an interface between the account database and the communication device.) and the retrieved shared system setup information (col. 23 lines 23-49); and

caching the account location information [server containing associated data] (See column 28, lines 51- 54 "In a second embodiment, the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number, the server containing the associated data." Storing in a local table on the DDS is considered caching the account location information.) and the retrieved shared system setup information (col. 23 lines 23-49) and using the cached account location information and the retrieved shared system setup information (col. 23 lines 23-49) for subsequently interfacing [transmitting to Server A] the at least one communications device with the respective account database. (See column 28, lines 57 – 61 "...the command stream generated by the DDS is transmitted to Server A which executes the commands and returns the record for Joe Smith through the DDS, in passthrough mode, to the requesting client.")

Regarding claim 17, Rierden teaches a computer-readable medium having computer executable instructions for interfacing at least one communications device [transaction generators] with a plurality of account databases [data servers] each for storing information associated with different accounts (See column 4, lines 11-16 “According to one embodiment of the invention, these and other objects of the invention are achieved through the use of at least one Data Directory Server (DDS) located between one or more transaction generators and one or more data servers. The DDS efficiently routes transactions and provides data location functions.” and see FIG 5. showing the different account information being stored on the data servers.); the computer-readable medium comprising:

a control module [DDS] for receiving an account access request from the at least one communications device [transaction generator] for a desired account (See column 5, lines 45-48 “The transaction generators 120 in the system of the present invention may be any devices capable of receiving input from a human user and transmitting that input to the Data Directory Servers (DDSs) 150.”),

retrieving account location information [locates the appropriate server] associating the desired account with a respective account database from a central database (see column 6, lines 8 – 10 “After receiving a client request, the selected DDS 150 first locates the appropriate server 160 for execution for the request...”), and

interfacing the at least one communications device with the respective account database associated with the desired account based thereon (see column 6, lines 10-12 "...it then submits the client request to the selected server and finally the DDS 150 returns the result to the submitting client 120." And see column 9, lines 22 – 25 "Alternatively, the result set may pass through the DDS 150 to the client 120 without any additional processing on the part of the DDS 150..." This is providing an interface between the account database and the communication device.), and

a caching module [internal table, part of the DDS] for caching the account location information [server containing associated data] (See column 28, lines 51- 54 "In a second embodiment, the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number, the server containing the associated data." Storing in a local table on the DDS is considered caching the account location information.), said control module using the cached account location information for subsequently interfacing [transmitting to Server A] the at least one communications device with the respective account database. (See column 28, lines 57 – 61 "...the command stream generated by the DDS is transmitted to Server A which executes the commands and returns the record for Joe Smith through the DDS, in passthrough mode, to the requesting client.");

the central database further storing shared system setup information (col. 23 lines 23-49), said control module also retrieving the shared system setup information (col. 23 lines 23-49) for use in interfacing the at least one communications device with the respective account database, and said caching module caching the retrieved shared system setup information (col. 23 lines 23-49).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5; 7, 8; 11; 13; 16; 9; and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rierden as applied to claims 3; 1; 10; 9; 14; 18; and 17, respectively above, and further in view of Smith et al. (hereinafter Smith, US 6,871,215).

Regarding claims 4,11, and 19, Rierden teaches a communication system substantially as claimed. Rierden does not explicitly disclose said at least one protocol interface module comprises at least one of a wireless access protocol (WAP) module, a post office protocol (POP) module, and a hypertext markup language (HTML) module.

However, Smith teaches said at least one protocol interface module comprises at least one of a wireless access protocol (WAP) module, a post office protocol (POP) module, and a hypertext markup language (HTML) module (See column 2, lines 30-34 “The universal mail application preferably includes multiple front-end user interfaces from WAP and HDML for installation on relevant wireless devices, e.g., on a PQA for PDS software, or on standard HTML interface.”)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Smith with Rierden because Smith also relates to handling a plurality of account files, and by including the various protocols mentioned in Smith, the system is more robust by being able to handle a variety of newer protocols, some of which allow for e-mail and internet functionality. It is for this reason that one of ordinary skill in the art would have been motivated to include said at least one protocol interface module comprises at least one of a wireless access protocol (WAP) module, a post office protocol (POP) module, and a hypertext markup language (HTML) module.

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Smith with Rierden because Smith also relates to handling a plurality of account files and by including the operating protocol interface of Smith, various disparate protocols can be interpreted, then used by the system providing greater functionality. It is for this reason that one of ordinary skill in the art would have been motivated to include said at least one communications device has an operating protocol associated therewith, and wherein said interface device comprises at least one protocol interface module for communicating with said at least one communications device using the operating protocol.

Regarding claim 5, the combination of Smith and Rierden additionally discloses said interface device further comprises a control module for interfacing said at least one protocol interface module with said central and account databases. (See Smith page 3, paragraph [0028] “The mail bridge 100 further includes an account information store 171 for storing account information for e mail accounts at the Internet mail servers, and an account information module that is used to manage and retrieve the account information in the account information store 171.” The mail bridge performs the function of the control module mentioned in the claim.)

Regarding claim 7, the combination of Smith and Rierden additionally teaches said at least one communications device comprises at least one mobile wireless communications device. (See Smith column 2, lines 25-29 “The present invention relates to a universal mail application for wireless device application which allows a user the ability to access and view email messages from a personal account using Internet Message Access Protocol (IMAP).” The device is a mobile wireless communication device.)

Regarding claims 8, 13, 16, and 21, the combination of Smith and Rierden additionally teaches the accounts comprise electronic mail (e-mail) accounts. (See Smith column 1, lines 41-44 “In accordance with the principles of the present invention, a universal mail module comprises a plurality of e mail account information files relating to a corresponding plurality of e mail accounts of a wireless subscriber.”)

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rierden as applied to claim 14 above, and further in view of Hoover.

Rierden teaches interfacing comprises interfacing the at least one communications device with the respective account database also based up on the retrieved shared system setup information. (see column 6, lines 10-12 "...it then submits the client request to the selected server and finally the DDS 150 returns the result to the submitting client 120." And see column 9, lines 22 – 25 "Alternatively, the result set may pass through the DDS 150 to the client 120 without any additional processing on the part of the DDS 150..." This is providing an interface between the account database and the communication device. And see column 28, lines 55 – 57 "In either case, the stored procedure is translated at the DDS level into SQL commands recognizable to the data servers containing the data." This translation uses the system setup information to facilitate the interfacing).

Rierden does not explicitly disclose retrieving further comprises retrieving shared system setup information from the central database, and wherein caching further comprises caching the retrieved shared system setup information also for use in subsequently interfacing the at least one communications device with the respective account database.



However, Hoover teaches retrieving further comprises retrieving shared system setup information from the central database, and wherein caching further comprises caching the retrieved shared system setup information also for use in subsequently interfacing [interact] the at least one communications device with the respective account database. (See column 23, lines 23-49, where object attribute tables are explained, which describes the format of the data in the database, and how the tables allow the system to interact with disparate database formats.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine Hoover with Rierden because Hoover also addresses distributed databases and by storing the system setup information, the various linked in systems do not have to have the setup information entered every time and provides for a more efficient system. It is for this reason that one of ordinary skill in the art would have been motivated to include said central database further stores shared system setup information; and wherein said interface device also retrieves and caches the shared system setup information for use in interfacing said at least one communications device with said respective account database.

#### **(10) Response to Argument**

Appellant's arguments filed in the Appeal Brief submitted 1/03/2008 have been fully considered but they are not persuasive.

Appellant argues in argument A (page 9-12) of the Appeal Brief (herein 'Brief') that the Rierden reference does not disclose the claimed invention. Specifically, Appellant argues that Rierden does not teach the claimed feature of "receiving an account access request from the

communications device for a desired account, retrieving account location information from the central database for the desired account, interfacing the communications device with the respective account database associated with the desired account based thereon, and caching the account location information and using the cached account location information for subsequently interfacing the communication device with the respective account database.” The Examiner disagrees given the following:

In accordance with figure 1 as well as the previous Office Action, Rierden is seen to teach at least the above claimed limitation.

As seen, Rierden discloses a plurality of account databases (see Rierden, col. 7 line 61-67: “the data servers 160 maintain the customer data and are accessible by each of the transaction generators”). Thus, data servers A-M 160 in figure 1 correlate to Appellant’s plurality of account databases.

Rierden teaches the claimed central database for storing location information associating each account with a respective account database. For example, Rierden teaches X-REF Servers functions as a resource available to a Data Directory Server (DDS) for determining where specific data resides (Rierden, col. 8 line 34-36). Furthermore, Rierden teaches the DDS 150 submits a request to the Xref Server 170 in order to retrieve the necessary data including the locations of that data (Rierden, col. 9 line 10-17). See further, Rierden's claim 3, which discloses the cross-reference servers providing data location information. This information is used to select the appropriate data server for processing a transaction (Rierden, col. 9 line 16-17).

Rierden teaches the claimed communications device as transaction generators (See Rierden col. 5 lines 45-48 :The transaction generators 120 in the system of the present invention may be any devices capable of receiving input from a human user and transmitting that input to the Data Directory Servers (DDSs) 150"). Furthermore, col. 9 line 17 and figure 2(a) in Rierden discloses the data servers 160 receiving transaction request from the transaction generators (e.g. clients accessing an account).

Rierden teaches the claimed interface device (DDS, directory server) for

Receiving an account access request from said at least one communications device for a desired account. That is, Rierden teaches the DDS receives client requests and then locates the appropriate server 160 for execution of the request (see Rierden, col. 6 line 8-10). In other words, Rierden's DDS receives account access request from clients and routes those request to the appropriate server, which contains the customer's account data.

Further, and in response to Appellant's argued limitation, Rierden teaches **retrieving account location information** (i.e. the DDS loads this information from the Xref servers containing location data; see Rierden, col. 8 line 34-36, as well as col. 9 line 10-17 and Rierden's claim 3) **from said central database (Xref server) for the desired account** (i.e. to select the appropriate server; col. 9 line 17) **and interfacing said at least one communications device with said respective account database associated with the desired account based thereon** (see Rierden, col. 9 line 10-17 and figure 1 wherein the DDS interfaces the transaction generators 120 (i.e. communications device) with the appropriate data server 160 (i.e. account

database) by loading necessary information (such as location information) from Xref servers 170).

Furthermore, Rierden teaches **caching the account location information** (Rierden, col. 9 line 11-13: “in a second embodiment...rather upon receiving a client request, the DDS 150 submits a request to the Xref Server 170 in order to retrieve the necessary data) **and using the cached account location information for subsequently interfacing said at least on communication device with said respective account databases** (this information includes location data to select the appropriate data server(s) 160 for processing the transaction (Rierden, col. 9 line 15-18).

The Examiner submits in the forgoing that Rierden teaches the presently claimed invention. The Appellant asserts (last 6 lines of page 10) that the claimed invention caches the retrieved account location information after it is requested by the communications device. The Examiner submits that Rierden teaches this by way of the DDS requesting location information from an Xref server *after* the transaction generator (client) sends a request. The Appellant further asserts that for Rierden to meet the claimed feature, the DDS would need to access the X-Ref server based upon a transaction request (see Brief, first paragraph of page 11). The Examiner submits that Rierden does exactly this as upon when Rierden's system receives a client request, the location data is then loaded (from the Xref Server) in to the DDS (see Rierden, col. 9 line 10-15).

The Examiner further submits that Rierden caches the retrieved location information that is retrieved from the Xref Server. That is, upon receiving a client request, the DDS effectively submits a request to the Xref Server, obtains the location information therefrom, and loads it to

memory (in other words, "caches") (see Rierden, col. 9 lines 10-17). Subsequently, the [client] request is submitted to the selected server(s) which processes the request and returns a result set to the DDS (see Rierden, col. 9 line 18-21 "*Next*, the request is submitted to the selected data servers which process the request and returns a result set...").

Further, the Appellant argues that Rierden loads the entire global table from the Xref Server to the DDS startup. The Examiner submits that not in every instance does this occur. For example, in one embodiment, the global tables are loaded from the Xref Server. However, in a second embodiment, the DDS retrieves only what is needed (see Rierden, Col. 9 line 11-13: "upon receiving a client request, the DDS 150 submits a request to the Xref Server in order to retrieve the *necessary* data). Moreover, Rierden teaches, in an exemplarily use of the system (see Rierden, col. 28 line 50-54), that the DDS itself maintains one or more internal tables which indicate, based upon a particular customer number the server containing the associated data. In other words, the DDS maintains (i.e. caches) location data so the appropriate account can be accessed.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/ROBERT TIMBLIN/  
Examiner, Art Unit 2167

Conferees:

Eddie C. Lee

/Eddie Lee/

Supervisory Patent Examiner, TC 2100

John Cottingham

/John R. Cottingham/

Supervisory Patent Examiner, Art Unit 2167